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### **REMARKS**

This paper is responsive to any paper(s) indicated above, and is responsive in any other manner indicated below.

### **PENDING CLAIMS**

Claims 2-16 were pending, under consideration and subjected to examination in the Office Action. Appropriate claims have been amended, canceled and/or added (without prejudice or disclaimer) in order to adjust a clarity and/or focus of Applicant's claimed invention. That is, such changes are unrelated to any prior art or scope adjustment and are simply refocused claims in which Applicant is present interested. At entry of this paper, Claims 2-16 will be pending for further consideration and examination in the application.

### **CLAIM OBJECTIONS OBIATED VIA CLAIM AMENDMENT**

Claims 4, 10, 13, 14 and 15 have been objected to because of the Office Action concerns listed within the section numbered "5" on page 2 of the Office Action. As amendments have been made where appropriate in order to address each of the Office Action listed concerns, reconsideration and withdrawal of the claim objection are respectfully requested.

### **ALLOWED CLAIMS**

Claims 4-5, 9, 12, 14-15 and 16 have been allowed in the application, as indicated within the section number "14" on page 7 of the Office Action. Ones of such claims have been minorly amended (e.g., to improve clarity, correct

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antecedents, remove extraneous portions) within this paper in a manner believed not to affect an allowability thereof. Reconsideration and renewal of the allowance are respectfully requested. Applicant and the undersigned respectfully thank the Examiner for such indication of allowable subject matter.

#### **REWRITTEN ALLOWABLE CLAIMS**

Claims 3, 7 and 8 have been indicated as being allowable if rewritten, as indicated within the section numbered "12" on page 7 of the Office Action, and at least appropriate base ones of such claims have been so rewritten. Further, ones of such claims have been minorly amended (e.g., to improve clarity, correct antecedents, remove extraneous portions) within this paper in a manner believed not to affect an allowability thereof. Reconsideration and renewal of the allowance are respectfully requested. Applicant and the undersigned respectfully thank the Examiner for such indication of allowable subject matter.

#### **ALLOWABLE CLAIMS DUE TO CHANGE IN DEPENDENCY**

Unrelated to any prior art rejections (e.g., to clarify and/or refocus Applicant's claims), Claims 10, 11 and 13 have been amended to depend from ones of the above-discussed allowable claims, and owing to dependency from allowable claims, such claims should likewise be allowable over the prior art of record, and any prior art rejections regarding such claims have become obsolete at this time. Accordingly, reconsideration and express written allowance of such claims are respectfully requested.

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### REJECTION UNDER 35 USC '102

The 35 USC '102 rejection of claim 2 is respectfully traversed. However, such rejections have been rendered obsolete by the present clarifying amendments to Applicant's claims, and accordingly, traversal arguments are not appropriate at this time. However, Applicant respectfully submits the following to preclude renewal of any such rejections against Applicant's clarified claims.

All descriptions of Applicant's disclosed and claimed invention, and all descriptions and rebuttal arguments regarding the applied prior art, as previously submitted by Applicant in any form, are repeated and incorporated hereat by reference. Further, all Office Action statements regarding the prior art rejections are respectfully traversed.

In order to properly support a '102 anticipatory-type rejection, any applied art reference must disclose each and every limitation of any rejected claim. The applied art does not adequately support a '102 anticipatory-type rejection because, at minimum, such applied art does not disclose (or suggest) the following discussed limitations of Applicant's claims, as set forth in arguments provided by Applicant's foreign representative.

The applicant's invention as claimed in claim 2 has a feature in that conversion of coded bits containing a parity bit is carried out even after the parity bit is added to execute precoder (if  $(1+D)$ ), in order to satisfy the MTR constraint throughout the bit stream. (See the description relative to FIGS. 2 and 3 in the present specification.)

NN70031724 is deficient in teaching/suggesting the above-indicated features/limitations, i.e., NN70031724 is substantially similar to Thomas Conway, "A

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New Target Response with parity Coding for High Density Magnetic Recording Channels", IEEE Transactions on Magnetics, Vol. 34, No. 4, pp. 2382-2386, July 1998 referred to as prior art on Page 2 of the present specification. Namely, such references merely differ from one another in a signal processing method applied. That is, partial response channel, Class IV is applied in NN70031724, while EEPR4 is applied in Thomas Conway.

As a result of all of the foregoing, it is respectfully submitted that the applied art would not support a '102 anticipatory-type rejection of Applicant's claims. Accordingly, reconsideration and withdrawal of such '102 rejection, and express written allowance of all of the '102 rejected claims, are respectfully requested.

#### **REJECTION UNDER 35 USC '103**

All 35 USC '103 rejections are respectfully traversed. However, such rejections have been rendered obsolete by the present clarifying amendments to Applicant's claims, and accordingly, traversal arguments are not appropriate at this time. However, Applicant respectfully submits the following to preclude renewal of any such rejections against Applicant's clarified claims.

All descriptions of Applicant's disclosed and claimed invention, and all descriptions and rebuttal arguments regarding the applied prior art, as previously submitted by Applicant in any form, are repeated and incorporated hereat by reference. Further, all Office Action statements regarding the prior art rejections are respectfully traversed. As additional arguments, Applicant respectfully submits the following.

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Unrelated to any prior art rejection, claims 10, 11 and 13 have had a dependency thereof changed, thus rendering this rejection of such claims obsolete at this time. Patentability of remaining ones of the rejected claims are supported as follows in arguments provided by Applicant's foreign representative.

The applicant's invention as claimed in claim 6 also has a feature in that conversion of coded bits containing a parity bit is carried out even after the parity bit is added to execute precoder ( $1/(1+D)$ ), in order to satisfy the MTR constraint throughout the bit stream.

As mentioned previously, NN70031724 is deficient as a reference, in that NN70031724 performs error detection and correction by applying Partial Response channel, Class IV.

Aziz et al (U.S. Pat. 6,130,329) discloses a 24/25 (0,9) coding method. However, this method limits the length of continuous "0" bits, but does not limit the length of continuous "1" bits.

Further, Thomas Conway referred to in the present specification performs error detection and correction using the parity bit by applying EEPR4. Fig. 7 (Simulated performance ...) of Thomas Conway shows that this method has a similar performance to the 8/9 TMTR code (the parity bit is not applied), and that higher code rates are better.

Accordingly, even if the Aziz's 24/25 (0,9) coding method were applied to NN70031724, only increase of code rates would be expected.

In contrast, according to the applicant's feature in that conversion of coded bits containing a parity bit is carried out even after the parity bit is added, any possible error that would occur by limiting the length of continuous "1" bits is

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suppressed and that, even if an error occurs, the error is detected and corrected by the parity bit. This would not have been suggested by the combination of the cited references. More particularly, a person skilled in the art easily understands that addition of a parity bit will interfere with the length of continuous "1" bits. In fact, the Thomas Conway's method is not combined with MTR code, though compared with MTR codes.

As a result of all of the foregoing, it is respectfully submitted that the applied art would not support a '103 obviousness-type rejection of Applicant's claims. Accordingly, reconsideration and withdrawal of such '103 rejections, and express written allowance of all of the rejected claims, are respectfully requested.

#### **EXAMINER INVITED TO TELEPHONE**

The Examiner is herein invited to telephone the undersigned attorneys at the local Washington, D.C. area telephone number of 703/312-6600 for discussing any Examiner's Amendments or other suggested actions for accelerating prosecution and moving the present application to allowance.

#### **RESERVATION OF RIGHTS**

It is respectfully submitted that any and all claim amendments and/or cancellations submitted within this paper and throughout prosecution of the present application are without prejudice or disclaimer. That is, any above statements, or any present amendment or cancellation of claims (all made without prejudice or disclaimer), should not be taken as an indication or admission that any objection/rejection was valid, or as a disclaimer of any scope or subject matter.

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Applicant respectfully reserves all rights to file subsequent related application(s) (including reissue applications) directed to any/all previously claimed limitations/features which have been subsequently amended or cancelled, or to any/all limitations/features not yet claimed, i.e., Applicant continues (indefinitely) to maintain no intention or desire to dedicate or surrender any limitations/features of subject matter of the present application to the public.

### **CONCLUSION**

In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims listed above as presently being under consideration in the application are now in condition for allowance.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR 1.136. Authorization is herein given to charge any shortage in the fees, including extension of time fees and excess claim fees, to Deposit Account No. 01-2135 (Case No. 500.38183CC2) and please credit any excess fees to such deposit account.

Based upon all of the foregoing, allowance of all presently-pending claims is respectfully requested.

Respectfully submitted,

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